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| 09/467,210      | 12/20/1999  | DAE-HEON KWON        | 678-405             | 2053             |

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EXAMINER

TRAN, HAI V

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| ART UNIT | PAPER NUMBER |
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2623

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05/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/467,210             | KWON ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Hai Tran               | 2623                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/08/2007 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis (US 6243596) in view of Tsukamoto et al. (US 5005013) and further in view of Lagoni et al. (US 6141058) and further in view of Porco (US 4873712) and further in view of Hofmann et al. (US 4427847).

Regarding claim 1, Kikinis discloses a cellular phone in which a TV tuner and receiver is installed in battery pack adapter 100 to allow user to receive and view television (see Fig. 9-12; Col. 17, lines 34-41).

Kikinis does not clearly disclose in detail "a first, second and third call alarm mode; a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage, to generate a composite video signal, a composite synchronizing signal and a composite audio signal"; "a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, synchronizing On Screen Display (OSD) data corresponding to display control data and display data with the composite synchronizing signal to output the synchronized signal as a video signal" and "A display unit for synchronizing the composite video signal from the TV module and the video signal from the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and the video signal on an image viewing screen"; However, Kikinis discloses a TV tuner and receiver is installed in battery pack 1 adapter 100 to allow the user to receive and view television (Col. 17, lines 34-41) on a display unit LCD 202.

Tsukamoto shows a hand-held device with a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received (antenna 2 receives a TV broadcast radio wave and a radio wave generated from a Radio transmission station of telephone office; Col. 3, lines 36-41) in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage (Col. 4, lines 4-10), to generate a composite video signal, a composite synchronizing signal and a composite audio signal (Col. 4, lines 10-21) and a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, synchronizing On Screen Display (Timing Control Circuit 35) data corresponding to display control data and display data with the composite synchronizing signal to output the synchronized signal as a video signal (Fig. 2 & 14; Col. 4, lines 4-64; Col. 10, lines 4-40 and Col. 13, lines 25-62). A display unit 3 (Fig. 2 and 14) for synchronizing the composite video signal from the TV module and the video signal from the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and the video signal on an image viewing screen (Col. 14, lines 25-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis' s Video driver 402 with the LCD's video circuitry driver, as taught by Tsukamoto, so to take the advantage of the well known design of the LCD video circuitry driver to drive the LCD to display the received video signal.

Moreover, Kikinis 's Cellular phone (MRFU) performs a two-way conversation in which CPU 401 (MSP) continuously processes both incoming and outgoing audio data. The incoming voice signal is received through a forward channel, demodulated and outputted to the audio speaker and the outgoing voice signal (reply back) is modulated from the microphone 203 and transmitted out on the reverse channel. Therefore, Kikinis 's Cellular phone (MRFU) encompasses the claimed limitation "a Mobile Station Radio Frequency Unit (MRFU) for demodulating a signal indicative of an incoming call received through a forward channel, forming an audio conversion channel among the received radio-frequency electromagnetic signals to output the demodulated signal, and modulating and transmitting a signal in a reverse channel"

Kikinis further discloses CPU 401 (A Mobile Station Processor) for establishing a phone mode for conversation or TV mode for displaying the received TV signal from the TV tuner on an image viewing screen (LCD 202) in response to an user selection.

Kikinis does not disclose, "a first, second and third call alarm mode" and "demodulating a signal indicative of an incoming call".

Lagoni discloses a television/telephone system (Fig. 1) wherein the telephone network interface 126 detects and demodulates a signal indicative of an incoming call received through a pair of conductors Tip (T) and Ring (R) (Col. 4, lines 4-7 and lines 14-17) and a 3<sup>rd</sup> call alarm mode comprises displaying one of an incoming call character message (displays Caller ID; Col. 4, lines 23-31) and a preset graphic message ( see Fig. 4); Therefore, it would have been obvious to one of ordinary skill

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in the art at the time the invention was made to modify Kikinis' s cellular phone system to detect the incoming telephone signal and display an alert message, i.e. Calling ID, as taught by Lagoni, so to notify the user of an incoming call while watching the TV and also to give the user a choice to answer or not to answer the incoming call based on the displayed Caller Id while watching a TV program (Col. 1, lines 17-23).

Kikinis in view of Tsukamoto and Lagoni does not clearly disclose "a 1<sup>st</sup> call alarm mode" and "wherein the 1<sup>st</sup> incoming call alarm mode comprises interrupting a power supply voltage supplied to the TV module and automatically switching from TV mode to the phone mode". However, Lagoni discloses that once the call is answered (see Fig. 5 at el. 530 indicates with "Yes" branching that a call is answered; Col. 4, lines 55-Col. 5, lines 18), Lagoni 's Telephone Network Interface Unit 126 is setting/getting/continuing/resuming back to its previous state of monitoring a future incoming caller-id message of a new incoming call.

Porco discloses "a 1<sup>st</sup> call alarm mode" and "wherein the 1<sup>st</sup> incoming call alarm mode comprises interrupting a power supply voltage supplied to the Audio/Radio module and automatically switching from audio/Radio mode to the phone mode" (Col. 3, lines 44-Col. 5, lines 27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis in view of Tsukamoto and Lagoni with Porco, so to interrupt the associated secondary accessory; i.e., TV, whose concurrent operation would be

interfering and distracting during operation of the telephone, as suggested by Porco (Col. 1, lines 1-13).

Kikinis in view of Tsukamoto, Lagoni and Porco does not disclose "a 2<sup>nd</sup> call alarm mode" and "wherein the 2<sup>nd</sup> incoming call alarm mode comprises switching off and on, at a predetermined interval, the audio signal output from the TV module".

Hoffman discloses "a 2<sup>nd</sup> call alarm mode" and "wherein the 2<sup>nd</sup> incoming call alarm mode comprises switching off and on, at a predetermined interval, the audio signal output from the TV module" (Col. 4, lines 55-Col. 5, lines 26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis in view of Tsukamoto, Lagoni and Porco, so to provide to user an alternative way to alert that an incoming call by interrupting and replacing the audio signal of the television to a ring tone of the incoming call through the speaker of the TV (see Col. 7, lines 45-67).

Limitation "A Mobile Station Processor (MSP) for establishing a phone or TV mode in response to an input command, generating the channel selection command signal stored in a predetermined memory area by setting the TV mode, and generating a reception of incoming call output from the MRFU call according to at least one of a 1<sup>st</sup>, a 2<sup>nd</sup> and a 3<sup>rd</sup> incoming call alarm modes, wherein the 1<sup>st</sup> incoming call alarm mode comprises interrupting a power supply voltage supplied to the TV module and switching from TV mode to the phone mode, the 2<sup>nd</sup> incoming call alarm mode comprises switching off and on, at a predetermined interval, the audio



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signal output from the TV module, and the 3<sup>rd</sup> incoming call alarm mode comprises displaying one of an incoming call character message and a preset graphic message, at a specific region or an entire portion of the TV image viewing screen in accordance with controlling the TV control unit, and processing audio data outputted from the MRFU to output the processed audio data signal while supplying audio data to the MRFU", is further met by Lagoni because Lagoni's controller 110 (MSP) establishes a TV mode in response to an input command from the RC 125, generating the channel-related data (channel selection command signal) stored in a predetermined RAM (memory area) (Col. 3, lines 1-3) by setting the switched ON of the Television receiver (TV mode) thereby allowing for viewing of a TV image (if TV receiver is switched ON, i.e., active and able to display a picture (Col. 4, lines 25-28), and upon reception of an incoming call/signal from the telephone network interface 126 (MRFU) (Col. 4, lines 18-32), Controller 110 supplies the display control data via control line 141 to the OSD processor 140 (Col. 3, lines 61-65+) to display an incoming call character message (displays Caller ID; Col. 4, lines 23-31) at a specific region of a TV image-viewing screen ( see Fig. 4) according to a Priority List Caller ID (preset incoming call alarm mode), and answering the call (processing audio data outputted from the MRFU to output the processed audio data signal while supplying audio data to the MRFU) by switching from TV mode to Phone mode;

Lagoni specifically further discloses that once the call is answered (see Fig. 5 at el. 530 indicates with "Yes" branching that a call is answered; Col. 4, lines 55-Col. 5, lines 18), Lagoni's Telephone Network Interface Unit 126 is

setting/getting/continuing/resuming back to its previous state of monitoring a future incoming caller-id message of a new incoming call.

Regarding claim 2, in view of the discussion in claim 1, neither Kikinis nor Lagoni clearly disclose a power switch disposed between the TV module and a power supply unit, the power switch being switched under the control of the MSP (Mobile Station Processor) to turn ON/OFF the TV module.

Tsukamoto further discloses a power switch (switch 6 'TV OFF mode', Fig. 1) disposed between the TV module and the AC power supply (not show), the power switch being switched under the control of the CPU 23 (MSP) to turn ON/OFF the display 3 (Fig. 9, steps B1, B2, B3, **B4** for TV OFF mode, B7 and **B8** for ON; Col. 9, lines 59-Col. 10, lines 3 and Col. 12, lines 54-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supply a power switch, as taught by Tsukamoto, so the Kikinis' s TV-Phone is able to display message of the incoming call while the system is under power saving mode, i.e., standby/sleep mode of powering off the display and the TV mode is OFF but not the main unit.

Regarding claim 3, in view of the discussion in claim 1, neither Kikinis nor Lagoni clearly disclose the a Radio Frequency Switch (RFSW) allowing an antenna to be connected to both the TV module and the Mobile Station RF unit (MRFU) in response to establishment of the TV mode of the Mobile Station processor (MSP)

and allowing the antenna to be connected to only the MRFU in response to the establishment of the phone mode of the MSP.

Tsukamoto discloses an antenna 2 receives a TV broadcast Radio wave and a radio wave generated from a radio transmission station of a telephone service (Fig. 1; Col. 3, lines 12-39; Fig. 9 shows an algorithm of how the switch 6 function, i.e., switch 6 on VHF/UHF position, works with CPU 23) in response to the establishment of the TV mode of the CPU 23 (MSP), and allowing the antenna 2 to be connected to only the Pager mode (MRFU) in response to the establishment of the Pager mode only (switch 6 on OFF position) of the CPU 23 (MSP). Thus, Tsukamoto's switch 6 is a RFSW.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis' TV-phone with an RF switch/RFSW connects an antenna to the TV module and the Mobile Station RF unit (MRFU), as taught by Tsukamoto, so that the TV-phone receives both signals simultaneously, TV and phone, and allows user to view TV while the phone receiver works in the background to alert the viewer of an incoming call (Col. 13, lines 7-10).

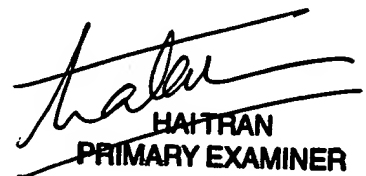
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is (571) 272-7305. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HT:ht  
05/10/2007

  
HAITRAN  
PRIMARY EXAMINER